REMARKS

Claims 1-30 are pending in this application, with claims 1, 7, 13, 14, 20 and 26-30 being independent. Claims 1, 2, 5, 7-9, 11, 13, 14, 18, 20, 24 and 26-30 have been amended. Favorable reconsideration and allowance are respectfully requested.

Claims 1-30 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patent No. 5,822,401 (Cave, et al.) in view of U.S. Patent No. 6,606,598 (Holthouse, et al.). This rejection is respectfully traversed.

As recited in independent claim 1, the present invention relates to a method of monitoring the performance of an interactive voice response (IVR) system used by an automated call processing center. Typically, a call includes an initial IVR portion and, at a caller's option, an agent-caller dialog portion. The method of claim 1 includes the steps of generating logs of call activity within the IVR system, determining routing information from those logs and noting in those logs significant activity in the agent-caller dialog portions of the calls.

In accordance with a salient aspect of the invention of claim 1, at least one effectiveness quantity is determined. This effectiveness quantity is determined by comparing a reason for a call implied from the routing information related to the call to a true intention of the caller, determined from the agent-caller dialog portion of the call. A performance model of the IVR system is generated from the logs of call activity and a performance value of the IVR system is determined by analyzing the logs of call activity, the determined routing information, the at least one effectiveness quantity and the performance model. This performance value is used to monitor the IVR system.

Independent claim 7 relates to an apparatus for monitoring the performance of an IVR system, including means corresponding generally to the steps of method of claim 1. Independent claim 13 relates to a monitoring apparatus, also having features corresponding to the claim 1 steps. Independent claim 14 relates to a system for monitoring IVR system performance, operable to carry out the various steps of claim 1. Independent claim 20 recites a computer program product including code for carrying out the claim 1 steps. Independent claims 26, 27, 28, 29 and 30 relate to a method, apparatus, apparatus, system and computer program product, respectively, reciting features corresponding to those recited in the above-referenced claims, but which are drafted in terms of an automated response system (instead of an IVR system) used by an automated contact processing center (instead of a call center), and in terms of a contact from a contactor rather than a call from a caller.

All of the independent claims recited the salient feature of claim 1 discussed above, namely determining an effectiveness quantity by comparing a reason for the call or contact implied from its routing information to a true intention determined from the agent-caller or agent-contactor dialog portion of the call or contact. This feature is not taught or suggested by the cited art.

Touch-tone IVR systems, which were introduced over a decade ago, are perhaps the most widespread class of human-computer interfaces. Since their inception, such systems have been adopted enthusiastically, particularly to perform customer-support types of functions, and have permitted their adopters to reduce significantly the amount of man-power required to maintain a call center. When configured properly, IVR systems can allow more customers to be

provided with more support and services more quickly than ever before, and can streamline the call center interaction process greatly.

Nonetheless, many calling customers classically have exhibited an antipathy towards IVR systems, viewing them as frustrating and difficult to use. Such problems generally stem not from the fact that interacting with an IVR system is an inherently complex task, but rather from the fact that the systems are often poorly configured, particularly from the point of view of their usability. As a result, it has become extremely desirous to the have tools which allow the manner in which an IVR system is used to be tracked and evaluated effectively, so that the systems usage may be assessed with an eye towards improvement.

The present invention provides such a tool, by taking the completely unique approach of determining an effectiveness quantity by comparing a reason for a call implied from determined routing information (which is based upon call activity within the IVR system) with a true intention of the caller determined from the agent-caller dialog portion. By comparing these two aspects, the effectiveness of the call center's IVR system is revealed.

Cave relates to statistical diagnosis in IVR telephone systems. As noted by the Office Action, Cave shows only monitoring the IVR portions of a call; it fails completely to teach or suggest recording the agent-caller dialog portion of the call, and of course fails to teach or suggest determining a true intention from such agent-caller dialog portion. For this feature, the Office Action looks to Holthouse.

Holthouse relates to statistical computing and reporting for interactive speech applications. The Office Action cites various portion of Holthouse (i.e., Abstract; col. 2: 1-14,

31-37, 46-58; col. 3: 5-8) as establishing a call log for an agent-caller dialog portion of a call, and cites other portions as of Holthouse (i.e., col. 4: 13-37; col. 5: 10-45; col. 7: 1-15) as suggesting the asking of callers for true intentions.

However, and significantly, the Office Action does not contend that Holthouse teaches or suggests determining an effectiveness quantity, by comparing a reason for a call implied from routing information related to the call to a true intention of the caller determined from the agent-caller dialog. Thus, even if Cave and Holthouse were combined, the claimed invention would not result. Accordingly, Applicants respectfully submit that the present invention is not at all obvious from Cave and Holthouse, and respectfully request the Examiner to remove the Section 103 rejection.

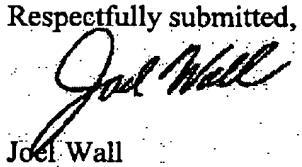
The remaining claims all depend from one of the independent claims discussed above, and each partakes in the novelty and non-obviousness of its respective base claim. In addition, each recites additional patentable features of the present invention, and individual reconsideration of each is respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and passage to issue of the present application.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 07-2347. If an extension of time under 37 C.F.R. § 1.136 not accounted for above is required, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,



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